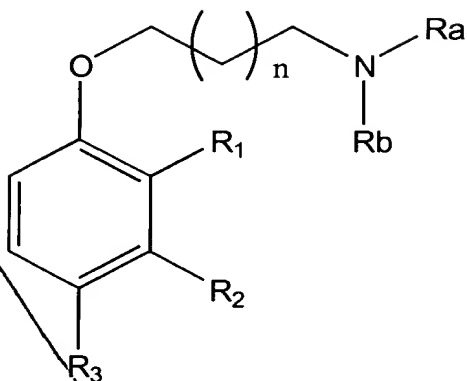


5

CLAIMS

1. A compound of formula (I):



wherein R<sub>a</sub> and R<sub>b</sub> are independently C<sub>1-8</sub> alkyl, C<sub>3-8</sub> alkenyl, C<sub>3-8</sub> cycloalkyl,

(C<sub>3-8</sub> cycloalkyl) C<sub>1-6</sub> alkyl, or taken together with the nitrogen to which they are attached form a 4-7 membered heterocyclyl optionally including up to 3 additional heteroatoms;

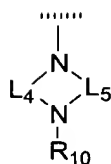
n is 0-4;

one of R<sub>1</sub>, R<sub>2</sub>, and R<sub>3</sub> is G, and the remaining two are hydrogen or halo;

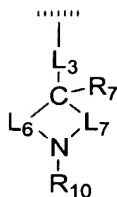
G is a nitrogen-containing group selected from one of the following:

-OL<sub>1</sub>Q, -L<sub>2</sub>Q, -N(L<sub>1</sub>Q)R<sub>5</sub>, -L<sub>3</sub>C(L<sub>1</sub>Q)R<sub>6</sub>R<sub>7</sub>, -C(L<sub>1</sub>Q)R<sub>6</sub>R<sub>7</sub>.

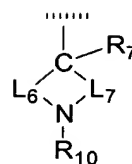
Sub  
A  
cont.  
5



(i)



(ii)



(iii)

wherein:

L<sub>1</sub> is C<sub>2-6</sub> alkylene, C<sub>3-8</sub> cycloalkylene, C<sub>4-6</sub> alkenylene, C<sub>4-6</sub> alkynylene, C<sub>2-5</sub> alkanoyl, (phenyl)C<sub>1-6</sub> alkylene, (naphthyl)C<sub>1-6</sub> alkylene, (C<sub>2-5</sub> heteroaryl)C<sub>1-6</sub> alkylene, (phenoxy)C<sub>1-6</sub> alkylene, or (C<sub>2-5</sub> heteroaryloxy)C<sub>1-6</sub> alkylene;

L<sub>2</sub> is C<sub>1-6</sub> alkylene, C<sub>3-8</sub> cycloalkylene, C<sub>3-6</sub> alkenylene, C<sub>3-6</sub> alkynylene, C<sub>2-5</sub> alkanoyl, (phenyl)C<sub>1-6</sub> alkylene, (naphthyl)C<sub>1-6</sub> alkylene, (C<sub>1-5</sub> heteroaryl)C<sub>1-6</sub> alkylene, (phenoxy)C<sub>1-6</sub> alkylene, (C<sub>1-5</sub> heteroaryloxy)C<sub>1-6</sub> alkylene, or (C<sub>1-5</sub> heteroarylthio)C<sub>1-6</sub> alkylene;

L<sub>3</sub> is C<sub>1-6</sub> alkylene, C<sub>2-6</sub> alkenylene, C<sub>2-6</sub> alkynylene, C<sub>2-5</sub> alkanoyl, (phenyl)C<sub>1-6</sub> alkylene, phenyl, naphthyl, (naphthyl)C<sub>1-6</sub> alkylene, C<sub>1-5</sub> heteroaryl)C<sub>1-6</sub> alkylene, (phenoxy)C<sub>1-6</sub> alkylene, (C<sub>1-5</sub> heteroaryloxy)C<sub>1-6</sub> alkylene, or C<sub>2-5</sub> heteroaryl;

L<sub>4</sub> is C<sub>1-5</sub> alkylene;

L<sub>5</sub> is C<sub>1-5</sub> alkylene;

L<sub>6</sub> is C<sub>1-5</sub> alkylene;

5

$L_7$  is  $C_{1-5}$  alkylene or absent;

Q is  $-NR_8R_9$  or a non-aromatic  $C_{2-15}$  heterocyclyl ring system containing at least one nitrogen atom and optionally between 1 and 3 additional heteroatoms selected from O, S, and N in each ring;

10

each of  $R_5$  and  $R_6$  is independently selected from hydrogen,  $C_{1-8}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{3-7}$  cycloalkyl,  $(C_{3-7}$  cycloalkyl) $C_{1-6}$  alkylene,  $C_{2-15}$  heterocyclyl, and  $(C_{2-7}$  heterocyclyl) $C_{1-6}$  alkylene;

15

$R_7$  is H, hydroxyl, halo,  $C_{2-6}$  alkoxy or absent where the carbon linking  $L_6$  and  $L_7$  (or bonded to  $R_6$ ) participates in a double bond;

20

each of  $R_8$  and  $R_9$  is independently selected from hydrogen,  $C_{1-8}$  alkyl,  $C_{3-8}$  alkenyl,  $C_{3-7}$  cycloalkyl,  $(C_{3-7}$  cycloalkyl) $C_{1-6}$  alkylene,  $C_{2-15}$  heterocyclyl, phenyl,  $(C_{2-15}$  heterocyclyl) $C_{1-6}$  alkylene, and (phenyl)  $C_{1-6}$  alkylene;

$R_{10}$  is H,  $C_{1-8}$  alkyl,  $C_{3-8}$  alkenyl,  $C_{3-7}$  cycloalkyl,  $(C_{3-7}$  cycloalkyl) $C_{1-6}$  alkylene,  $(C_{2-15}$  heterocyclyl) $C_{1-6}$  alkylene, or (phenyl)  $C_{1-6}$  alkylene;

25

wherein each of the above alkyl, alkylene, alkenyl, alkenylene, alkynyl, alkynylene, heterocyclyl, cycloalkyl, and aryl groups may each be independently and optionally substituted with between 1 and 3 substituents selected from halo, amino, nitro, hydroxyl, and  $C_{1-3}$  alkyl;

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wherein substituents of Q can be further selected from carboxamide,  $C_{2-6}$  alkyl,  $C_{1-8}$  heterocyclyl,  $N(C_{1-6}$  alkyl) $(C_{1-8}$  heterocyclyl),  $NH(C_{1-8}$  heterocyclyl),  $(C_{1-8}$  heterocyclyl)  $C_{1-3}$  alkylene,  $O(C_{1-8}$  heterocyclyl),  $C_{1-6}$  alkoxy, (phenyl) $C_{3-6}$  cycloalkyl-O-, phenyl, (phenyl)  $C_{1-3}$  alkylene,  $N(C_{1-6}$

alkyl)[(phenyl) $C_{1-3}$  alkylene], and (phenyl) $C_{1-3}$  alkylene-O- where each of above heterocyclyl, phenyl, and alkyl groups may be optionally substituted with from 1 to 3 substituents independently selected from halogen, nitro, cyano, and  $C_{1-3}$  alkyl;

10 or a pharmaceutically acceptable salt, ester, or amide thereof.

2. A compound of claim 1, wherein  $NR_aR_b$  taken together form piperidyl, methylpiperidyl, dimethylamino, pyrrolidinyl, diethylamino, methylethylamino, ethylpropylamino, or dipropylamino.
3. A compound of claim 2, wherein  $NR_aR_b$  taken together form piperidyl, pyrrolidinyl, or diethylamino.
4. A compound of claim 3, wherein  $NR_aR_b$  taken together form piperidyl or pyrrolidinyl.
5. A compound of claim 1, wherein one of  $R_2$  and  $R_3$  is G.
6. A compound of claim 5, wherein  $R_2$  is G.
7. A compound of claim 5, wherein  $R_3$  is G.
8. A compound of claim 1, wherein n is between 1 and 4, inclusive.
9. A compound of claim 8, wherein n is 1.
10. A compound of claim 1, wherein  $L_1$  is  $C_{2-3}$  alkylene.

- 5 11. A compound of claim 1, wherein  $L_2$  is  $C_{1-6}$  alkylene, ( $C_{1-5}$  heteroaryl) $C_{1-6}$  alkylene, or -phenyl- $C_{1-6}$  alkylene.
12. A compound of claim 11, wherein  $L_2$  is methylene.
- 10 13. A compound of claim 1, wherein  $L_3$  is ethylene, vinylene, ethynylene, and phenylene.
14. A compound of claim 1, wherein Q is a non-aromatic nitrogen-containing  $C_{2-5}$  heterocyclyl.
15. A compound of claim 14, wherein Q is selected from piperidyl, N-( $C_{1-6}$  alkyl)piperazinyl, piperazinyl, pyrrolinyl, pyrrolidinyl, and morpholinyl.
16. A compound of claim 14, wherein Q is N-morpholinyl or N-piperidinyl, optionally substituted with between 1 and 3 substituents selected from hydroxyl, carboxamide,  $C_{1-6}$  alkyl,  $C_{1-8}$  heterocyclyl, N( $C_{1-6}$  alkyl)( $C_{1-8}$  heterocyclyl), NH( $C_{1-8}$  heterocyclyl), ( $C_{1-8}$  heterocyclyl) $C_{1-3}$  alkylene,  $C_{1-8}$  heterocyclyl-O-,  $C_{1-6}$  alkoxy, ( $C_{3-6}$  cycloalkyl)-O-, phenyl, (phenyl) $C_{1-3}$  alkylene, N( $C_{1-6}$  alkyl)[(phenyl) $C_{1-3}$  alkylene, and (phenyl) $C_{1-3}$  alkylene-O- where each of above heterocyclyl, phenyl, and alkyl groups may be optionally substituted with from 1 to 3 substituents independently selected from halogen, nitro, cyano, and  $C_{1-3}$  alkyl.
17. A compound of claim 16, wherein Q is substituted with a substituent comprising a  $C_{1-6}$  heterocyclyl group selected from: pyridyl, pyrimidyl, furyl, thiofuryl, imidazolyl, (imidazolyl) $C_{1-6}$  alkylene, oxazolyl, thiazolyl, 2,3-dihydro-indolyl, benzimidazolyl, 2-oxobenzimidazolyl,

- 5 (tetrazolyl)C<sub>1-6</sub> alkylene, tetrazolyl, (triazolyl)C<sub>1-6</sub> alkylene, triazolyl, (pyrrolyl)C<sub>1-6</sub> alkylene, and pyrrolyl.
18. A compound of claim 17, wherein Q is a substituted or unsubstituted N-morpholinyl.
- 10 19. A compound of claim 1, wherein Q is NR<sub>8</sub>R<sub>9</sub> wherein each of R<sub>8</sub> or R<sub>9</sub> is independently selected from hydrogen, C<sub>1-8</sub> alkyl, C<sub>3-8</sub> alkenyl, C<sub>3-7</sub> cycloalkyl, (C<sub>3-7</sub> cycloalkyl)C<sub>1-6</sub> alkylene, C<sub>2-5</sub> heterocyclyl, phenyl, (C<sub>2-5</sub> heterocyclyl)C<sub>1-6</sub> alkylene, and (phenyl) C<sub>1-6</sub> alkylene.
20. A compound of claim 19, wherein one of R<sub>8</sub> and R<sub>9</sub> is hydrogen.
21. A compound of claim 20, wherein R<sub>8</sub> is H and R<sub>9</sub> is phenyl or aromatic C<sub>1-8</sub> heterocyclyl optionally substituted with 1-3 substituents selected from halo, nitro, cyano, and C<sub>1-3</sub> alkyl.
22. A compound of claim 21, wherein R<sub>9</sub> is phenyl, pyridyl, pyrimidyl, furyl, thiofuryl, imidazolyl, (imidazolyl)C<sub>1-6</sub> alkylene, oxazolyl, thiazolyl, 2,3-dihydro-indolyl, benzimidazolyl, 2-oxobenzimidazolyl, (tetrazolyl)C<sub>1-6</sub> alkylene, tetrazolyl, (triazolyl)C<sub>1-6</sub> alkylene, triazolyl, (pyrrolyl)C<sub>1-6</sub> alkylene, and pyrrolyl.
23. A compound of claim 20, wherein NR<sub>a</sub>R<sub>b</sub> taken together form piperidyl, methylpiperidyl, dimethylamino, pyrrolidinyl, diethylamino, methylethylamino, ethylpropylamino, or dipropylamino.
24. A compound of claim 22, wherein NR<sub>a</sub>R<sub>b</sub> taken together form piperidyl, pyrrolidinyl, or diethylamino.

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25. A compound of claim 20, wherein n is 1.
26. A compound of claim 1, wherein G is selected from:
- (4) formula (i) wherein  $L_4$  and  $L_5$  are independently selected from  $C_{2-3}$  alkylene,
- (5) formula (iii) wherein  $L_6$  is  $C_{2-3}$  alkylene and  $L_7$  is  $C_{2-3}$  alkylene or absent,
- (6)  $L_2Q$  wherein  $L_2$  is  $C_{1-6}$  alkylene, phenyl  $C_{1-4}$  alkylene, or (aromatic  $C_{1-5}$  heterocyclyl) $C_{1-4}$  alkylene, and
- (7)  $OL_1Q$  wherein  $L_1$  is  $C_{2-3}$  alkylene.
27. A compound of claim 26, wherein G is selected from:
- (8) formula (i) wherein  $L_4$  and  $L_5$  are each  $C_2$  alkylene,
- (9) formula (iii) wherein each of  $L_6$  and  $L_7$  is  $C_2$  alkylene, and
- (10)  $L_2Q$  wherein  $L_2$  is methylene.
28. A compound of claim 27, wherein G is  $L_2Q$ .
29. A compound of claim 26, wherein  $R_{10}$  is H, branched  $C_{3-6}$  alkyl, or benzyl.
30. A compound of claim 29, wherein  $R_{10}$  is isopropyl or benzyl.
31. A compound of claim 26, wherein Q is a non-aromatic  $C_{2-5}$  heterocyclyl.
32. A compound of claim 31, wherein Q is selected from piperidyl, N-( $C_{1-6}$  alkyl)piperazinyl, piperazinyl, pyrrolinyl, pyrrolidinyl, and morpholinyl.

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33. A compound of claim 27, wherein Q is a non-aromatic C<sub>2-5</sub> heterocyclyl.

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34. A compound of claim 33, wherein Q is selected from piperidyl, N-(C<sub>1-6</sub> alkyl)piperazinyl, piperazinyl, pyrrolinyl, pyrrolidinyl, and morpholinyl.

35. A compound of claim 34, wherein Q is selected from piperidyl, N-(C<sub>1-6</sub> alkyl)piperazinyl, piperazinyl, pyrrolinyl, pyrrolidinyl, and morpholinyl.

36. A compound of claim 28, wherein NR<sub>a</sub>R<sub>b</sub> taken together form piperidyl, pyrrolidinyl, or diethylamino.

37. A compound of claim 26, wherein n is 1.

38. A compound of claim 25, wherein R<sub>7</sub> is hydroxyl, halo, or absent where one of L<sub>6</sub> and L<sub>7</sub> provides a double bond to the carbon atom to which R<sub>6</sub> and R<sub>7</sub> are attached.

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39. A compound of claim 19, selected from: Methyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-(2-pyridin-2-yl-ethyl)-amine, Benzyl-methyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, Methyl-(1-methyl-piperidin-4-yl)-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, Ethyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-pyridin-4-ylmethyl-amine, [2-(3,4-Dimethoxy-phenyl)-ethyl]-methyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, Methyl-phenethyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, Dimethyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, Dimethyl-{2-[4-(3-piperidin-1-yl-propoxy)-phenoxy]-ethyl}-amine, Methyl-phenethyl-[3-(3-piperidin-1-yl-

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- 5 propoxy)-benzyl]-amine, and Dibenzyl-(3-{2-[4-(3-piperidin-1-yl-propoxy)-phenyl]-pyrrol-1-yl}-propyl)-amine.
40. A compound of claim 19, selected from: Indan-1-yl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, Cyclohexyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, Cyclopropyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, Pyridin-2-yl-[4-(3-pyrrolidin-1-yl-propoxy)-benzyl]-amine, [4-(3-Piperidin-1-yl-propoxy)-benzyl]-pyridin-2-yl-amine, Phenyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, [3-(3-Piperidin-1-yl-propoxy)-benzyl]-pyridin-2-yl-amine, (4-Chloro-phenyl)-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, and (4-Chloro-phenyl)-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine.
41. A compound of claim 1, selected from: 4-[3-(3-Piperidin-1-ylmethyl-phenoxy)-propyl]-morpholine, 1-[3-(4-Piperidin-1-ylmethyl-phenoxy)-propyl]-piperidine, Benzyl-methyl-{1-[4-(3-piperidin-1-yl-propoxy)-benzyl]-piperidin-4-yl}-amine, 1-[3-(4-Piperidin-1-ylmethyl-phenoxy)-propyl]-decadeuterio-piperidine, 1-(3-[4-[5-(3-Piperidin-1-yl-propylsulfanyl)-tetrazol-1-yl]-phenoxy]-propyl)-piperidine, 1-[4-(3-Piperidin-1-yl-propoxy)-benzyl]-piperidin-4-ol, 4-[4-(3-Piperidin-1-yl-propoxy)-benzyl]-morpholine, 2-[4-(3-Piperidin-1-yl-propoxy)-benzyl]-1,2,3,4-tetrahydro-isoquinoline, {1-[4-(3-Piperidin-1-yl-propoxy)-benzyl]-piperidin-4-yl}-pyridin-2-yl-amine, 1-Benzyl-4-[4-(3-piperidin-1-yl-propoxy)-benzyl]-piperazine, Indan-1-yl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, Cyclohexyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, Cyclopropyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, 8-[4-(3-Piperidin-1-yl-propoxy)-benzyl]-1,4-dioxa-8-aza-spiro[4.5]decane, 1-[4-(3-Piperidin-1-yl-propoxy)-benzyl]-piperidine-4-carboxylic acid amide, Methyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-(2-pyridin-2-yl-ethyl)-

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5 yl}-2,3-dihydro-1H-indole, 1-Isopropyl-4-[4-(3-piperidin-1-yl-propoxy)-  
benzyl]-piperazine, 1-[4-(3-Piperidin-1-yl-propoxy)-benzyl]-  
azacyclotridecane, 1-Methyl-4-[4-(3-piperidin-1-yl-propoxy)-benzyl]-  
piperazine, 5-Bromo-1-{1-[4-(3-piperidin-1-yl-propoxy)-benzyl]-  
piperidin-4-yl}-2,3-dihydro-1H-indole, Methyl-phenethyl-[3-(3-piperidin-  
10 1-yl-propoxy)-benzyl]-amine, 2-{1-[3-(4-Piperidin-1-ylmethyl-phenoxy)-  
propyl]-piperidin-2-yl}-ethanol, 4-[3-(4-Piperidin-1-ylmethyl-phenoxy)-  
propyl]-morpholine, 2-[4-(2-Piperidin-1-yl-ethoxy)-benzyl]-1,2,3,4-  
tetrahydro-isoquinoline, Pyridin-2-yl-[4-(3-pyrrolidin-1-yl-propoxy)-  
benzyl]-amine, 1-[4-(3-Piperidin-1-yl-propoxy)-benzyl]-1,2,3,4-  
15 tetrahydro-quinoline, [4-(3-Piperidin-1-yl-propoxy)-benzyl]-pyridin-2-yl-  
amine, 1-[2-(4-Piperidin-1-ylmethyl-phenoxy)-ethyl]-piperidine,  
Dibenzyl-(3-{2-[4-(3-piperidin-1-yl-propoxy)-phenyl]-pyrrol-1-yl}-propyl)-  
amine, Dimethyl-[3-(4-piperidin-1-ylmethyl-phenoxy)-propyl]-amine,  
Phenyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, [3-(3-Piperidin-1-yl-  
20 propoxy)-benzyl]-pyridin-2-yl-amine, 5-(3-Piperidin-1-yl-propoxy)-2-[4-  
(3-piperidin-1-yl-propoxy)-phenyl]-pyrimidine, (4-Chloro-phenyl)-[4-(3-  
piperidin-1-yl-propoxy)-benzyl]-amine, 1-Methyl-4-[3-(4-piperidin-1-  
ylmethyl-phenoxy)-propyl]-piperazine, 1-[4-(2-Piperidin-1-yl-ethoxy)-  
benzyl]-1,2,3,4-tetrahydro-quinoline, (4-Chloro-phenyl)-[3-(3-piperidin-  
25 1-yl-propoxy)-benzyl]-amine.

43. A compound of claim 1, selected from: 4-[3-(3-Piperidin-1-ylmethyl-  
phenoxy)-propyl]-morpholine, 1-[3-(4-Piperidin-1-ylmethyl-phenoxy)-  
propyl]-piperidine, Benzyl-methyl-{1-[4-(3-piperidin-1-yl-propoxy)-  
30 benzyl]-piperidin-4-yl}-amine, 1-[3-(4-Piperidin-1-ylmethyl-phenoxy)-  
propyl]-decadeuterio-piperidine, 1-(3-{4-[5-(3-Piperidin-1-yl-  
propylsulfanyl)-tetrazol-1-yl]-phenoxy}-propyl)-piperidine, 1-[4-(3-  
Piperidin-1-yl-propoxy)-benzyl]-piperidin-4-ol, 4-[4-(3-Piperidin-1-yl-

5 propoxy)-benzyl]-morpholine, 2-[4-(3-Piperidin-1-yl-propoxy)-benzyl]-  
 1,2,3,4-tetrahydro-isoquinoline, {1-[4-(3-Piperidin-1-yl-propoxy)-  
 benzyl]-piperidin-4-yl}-pyridin-2-yl-amine, 1-Benzyl-4-[4-(3-piperidin-1-  
 yl-propoxy)-benzyl]-piperazine, Indan-1-yl-[4-(3-piperidin-1-yl-propoxy)-  
 benzyl]-amine, Cyclohexyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine,  
 10 Cyclopropyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, 8-[4-(3-  
 Piperidin-1-yl-propoxy)-benzyl]-1,4-dioxo-8-aza-spiro[4.5]decane, 1-[4-  
 (3-Piperidin-1-yl-propoxy)-benzyl]-piperidine-4-carboxylic acid amide,  
 Methyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-(2-pyridin-2-yl-ethyl)-  
 amine, Benzyl-methyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, 4-  
 15 Phenyl-1-[4-(3-piperidin-1-yl-propoxy)-benzyl]-piperidin-4-ol, 1-Phenyl-  
 4-[4-(3-piperidin-1-yl-propoxy)-benzyl]-piperazine, Methyl-phenethyl-{1-  
 [4-(3-piperidin-1-yl-propoxy)-benzyl]-piperidin-4-yl}-amine, 2-Methyl-1-  
 [3-(4-piperidin-1-ylmethyl-phenoxy)-propyl]-piperidine, Methyl-(1-  
 methyl-piperidin-4-yl)-[4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, {1-[4-  
 20 (3-Piperidin-1-yl-propoxy)-benzyl]-piperidin-4-yl}-pyridin-2-yl-(2-  
 pyrrolidin-1-yl-ethyl)-amine, 2-{1-[4-(3-Piperidin-1-yl-propoxy)-benzyl]-  
 piperidin-4-yl}-ethanol, 1-[3-(4-Pyrrolidin-1-ylmethyl-phenoxy)-propyl]-  
 piperidine, 1-{3-[4-(4-Benzylidene-piperidin-1-ylmethyl)-phenoxy]-  
 propyl}-piperidine, and Ethyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-  
 25 pyridin-4-ylmethyl-amine.

44. A compound of claim 1, selected from: 1-{3-[4-(4-Benzyl-piperidin-1-  
 ylmethyl)-phenoxy]-propyl}-piperidine, 2-(4-Chloro-phenyl)-5-[4-(3-  
 piperidin-1-yl-propoxy)-benzyl]-2,5-diaza-bicyclo[2.2.1]heptane, 1-[3-  
 30 (2'-Piperidin-1-ylmethyl-biphenyl-4-yloxy)-propyl]-piperidine, 1-{1-[4-(3-  
 Piperidin-1-yl-propoxy)-benzyl]-piperidin-4-yl}-1,3-dihydro-  
 benzoimidazol-2-one, 1-(3-{4-[1-(3-Piperidin-1-yl-propyl)-1H-pyrrol-2-yl]-  
 phenoxy}-propyl)-piperidine, 1-(3-Phenyl-allyl)-4-[4-(3-piperidin-1-yl-

5 propoxy)-benzyl]-piperazine, [2-(3,4-Dimethoxy-phenyl)-ethyl]-methyl-  
 [4-(3-piperidin-1-yl-propoxy)-benzyl]-amine, Methyl-phenethyl-[4-(3-  
 piperidin-1-yl-propoxy)-benzyl]-amine, 1-{3-[3-(4-Benzylidene-piperidin-  
 1-ylmethyl)-phenoxy]-propyl}-piperidine, 4-(4-Chloro-phenyl)-1-[4-(3-  
 10 piperidin-1-yl-propoxy)-benzyl]-piperidin-4-ol, 1-[4-(3-Piperidin-1-yl-  
 propoxy)-benzyl]-4-(3-phenyl-propyl)-piperidine, Dimethyl-[4-(3-  
 piperidin-1-yl-propoxy)-benzyl]-amine, 1-{1-[4-(3-Piperidin-1-yl-  
 propoxy)-benzyl]-piperidin-4-yl}-1H-benzoimidazole, 1-[4-(3-Piperidin-  
 1-yl-propoxy)-benzyl]-1,2,3,4,5,6-hexahydro-[2,3']bipyridinyl, 1-{1-[4-(3-  
 15 Piperidin-1-yl-propoxy)-benzyl]-piperidin-4-yl}-2,3-dihydro-1H-indole, 1-  
 Isopropyl-4-[4-(3-piperidin-1-yl-propoxy)-benzyl]-piperazine, 1-[4-(3-  
 Piperidin-1-yl-propoxy)-benzyl]-azacyclotridecane, 1-Methyl-4-[4-(3-  
 piperidin-1-yl-propoxy)-benzyl]-piperazine, 5-Bromo-1-{1-[4-(3-  
 piperidin-1-yl-propoxy)-benzyl]-piperidin-4-yl}-2,3-dihydro-1H-indole,  
 Methyl-phenethyl-[3-(3-piperidin-1-yl-propoxy)-benzyl]-amine, 2-{1-[3-  
 20 (4-Piperidin-1-ylmethyl-phenoxy)-propyl]-piperidin-2-yl}-ethanol, 4-[3-  
 (4-Piperidin-1-ylmethyl-phenoxy)-propyl]-morpholine, 2-[4-(2-Piperidin-  
 1-yl-ethoxy)-benzyl]-1,2,3,4-tetrahydro-isoquinoline, Pyridin-2-yl-[4-(3-  
 pyrrolidin-1-yl-propoxy)-benzyl]-amine, 1-[4-(3-Piperidin-1-yl-propoxy)-  
 benzyl]-1,2,3,4-tetrahydro-quinoline, [4-(3-Piperidin-1-yl-propoxy)-  
 25 benzyl]-pyridin-2-yl-amine, 1-[2-(4-Piperidin-1-ylmethyl-phenoxy)-  
 ethyl]-piperidine, Dibenzyl-(3-{2-[4-(3-piperidin-1-yl-propoxy)-phenyl]-  
 pyrrol-1-yl}-propyl)-amine, Dimethyl-[3-(4-piperidin-1-ylmethyl-  
 phenoxy)-propyl]-amine, Phenyl-[4-(3-piperidin-1-yl-propoxy)-benzyl]-  
 amine, and [3-(3-Piperidin-1-yl-propoxy)-benzyl]-pyridin-2-yl-amine.

30 45. A compound of claim 1, selected from: 1-Isopropyl-4-[4-(3-piperidin-1-  
 yl-propoxy)-phenyl]-piperazine, 1-[4-(3-Piperidin-1-yl-propoxy)-phenyl]-  
 piperazine hydrochloride, 1-Benzyl-4-[4-(3-pyrrolidin-1-yl-propoxy)-

- 5 phenyl]-piperazine, 1-[4-(3-Pyrrolidin-1-yl-propoxy)-phenyl]-piperazine hydrochloride, and 1-Benzyl-4-[4-(3-piperidin-1-yl-propoxy)-phenyl]-piperazine.
- 10 46. A compound of claim 26, selected from: 1-[4-(3-Piperidin-1-yl-propoxy)-phenyl]-piperazine, 1-Isopropyl-4-[4-(3-piperidin-1-yl-propoxy)-phenyl]-piperazine, 1-Benzyl-4-[4-(3-pyrrolidin-1-yl-propoxy)-phenyl]-piperazine, and 1-[4-(3-Pyrrolidin-1-yl-propoxy)-phenyl]-piperazine.
- 15 47. A compound of claim 1, selected from: 1-{3-[2'-(1-Isopropyl-piperidin-4-yl)-biphenyl-4-yloxy]-propyl}-piperidine, 1-(3-{4-[2-(1-Methyl-pyrrolidin-2-yl)-ethyl]-phenoxy}-propyl)-piperidine, and 1-{3-[4-(1-Isopropyl-piperidin-4-ylmethyl)-phenoxy]-propyl}-piperidine.
- 20 48. A compound of claim 1, selected from: 1-{3-[4-(1-Methyl-pyrrolidin-2-yl)-phenoxy]-propyl}-piperidine, 1-Benzyl-4-[4-(3-piperidin-1-yl-propoxy)-phenyl]-piperidin-4-ol, and 1-Isopropyl-4-[4-(3-piperidin-1-yl-propoxy)-phenyl]-piperidin-4-ol.
- 25 49. A compound of claim 26, selected from: 1-{3-[4-(1-Methyl-pyrrolidin-2-yl)-phenoxy]-propyl}-piperidine, and 1-Benzyl-4-[4-(3-piperidin-1-yl-propoxy)-phenyl]-piperidin-4-ol.
- 30 50. A compound of claim 1, selected from: {3-Furan-2-yl-3-[4-(3-piperidin-1-yl-propoxy)-phenyl]-propyl}-dimethyl-amine, 4-{3-[4-(3-Piperidin-1-yl-propoxy)-phenyl]-3-pyrimidin-2-yl-propyl}-morpholine, 4-{4,4,4-Trifluoro-3-[4-(3-piperidin-1-yl-propoxy)-phenyl]-butyl}-morpholine, and 4-{4,4,4-Trifluoro-3-[4-(3-piperidin-1-yl-propoxy)-phenyl]-butyl}-morpholine.

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51. A compound of claim 1, selected from: (2-Morpholin-4-yl-ethyl)-[4-(3-piperidin-1-yl-propoxy)-phenyl]-pyridin-2-yl-amine, Isopropyl-(2-morpholin-4-yl-ethyl)-[4-(3-piperidin-1-yl-propoxy)-phenyl]-amine, and (2-Morpholin-4-yl-ethyl)-[4-(3-piperidin-1-yl-propoxy)-phenyl]-thiazol-2-ylmethyl-amine.

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52. A pharmaceutical composition comprising a compound of claim 1, 26, 27, 41, 44 or 47, and a pharmaceutically-acceptable excipient.

53. A compound of claim 1, 26, 27, or 41, isotopically-labelled to be detectable by PET or SPECT.

54. A method of inhibiting histamine H<sub>3</sub> receptor activity in a subject, comprising administering an effective amount of a compound of claim 1, 26, 27, or 41 to a subject in need of such inhibition of histamine H<sub>3</sub> receptor activity.

55. A method of treating a subject having a disease or condition modulated by histamine H<sub>3</sub> receptor activity, comprising administering to the subject a therapeutically effective amount of a compound of claim 1, 26, 27, or 41.

56. A method of claim 55, wherein said disease or condition is selected from the group consisting of sleep/wake disorders, arousal/vigilance disorders, migraine, asthma, dementia, mild cognitive impairment (pre-dementia), Alzheimer's disease, epilepsy, narcolepsy, eating disorders, motion sickness, vertigo, attention deficit hyperactivity disorders,

5 learning disorders, memory retention disorders, schizophrenia, nasal congestion, allergic rhinitis, and upper airway allergic response.

57. A method for treating a disease or condition modulated by at least one receptor selected from the histamine H<sub>1</sub> receptor and the histamine H<sub>3</sub> receptor, said method comprising (a) administering to a subject a jointly effective amount of a histamine H<sub>1</sub> receptor antagonist compound, and (b) administering to the subject a jointly effective amount of a compound of claim 1, 26, 27, or 41, said method providing a jointly therapeutically effective amount of said compounds.

58. The method of claim 57 wherein the histamine H<sub>1</sub> receptor antagonist and the compound of claim 1, 26, 27, or 41 are present in the same dosage form.

59. A method for treating diseases or conditions modulated by at least one receptor selected from the histamine H<sub>2</sub> receptor and the histamine H<sub>3</sub> receptor in a subject, comprising (a) administering to the subject a jointly effective amount of a histamine H<sub>2</sub> receptor antagonist compound, and (b) administering to the subject a jointly effective amount of a compound of claim 1, 26, 27, or 41, said method providing a jointly therapeutically effective amount of said compounds.

60. The method of claim 59 wherein the histamine H<sub>2</sub> receptor antagonist and the compound of claim 1, 26, 27, or 41 are present in the same dosage form.

61. A method for treating one or more disorders or conditions selected from the group consisting of sleep/wake disorders, narcolepsy, and



- 5 arousal/vigilance disorders, comprising administering to a subject a therapeutically effective amount of a compound of claim 1, 26, 27, or 41.
- 10 62. A method for treating attention deficit hyperactivity disorders (ADHD), comprising administering to a subject a therapeutically effective amount of a compound of claim 1, 26, 27, or 41.
- 15 63. A method for treating one or more disorders or conditions selected from the group consisting of dementia, mild cognitive impairment (pre-dementia), cognitive dysfunction, schizophrenia, depression, manic disorders, bipolar disorders, and learning and memory disorders, comprising administering to a subject a therapeutically effective amount of a compound of claim 1, 26, 27, or 41.
- 20 64. A method for treating or preventing upper airway allergic response, nasal congestion, or allergic rhinitis, comprising administering to a subject a therapeutically effective amount of a compound of claim 1, 26, 27, or 41.
- 25 65. A method for studying disorders mediated by the histamine H<sub>3</sub> receptor, comprising using an <sup>18</sup>F-labeled compound of claim 1 as a positron emission tomography (PET) molecular probe.